

REMARKS

This Application has been carefully reviewed in light of the Office Action mailed July 12, 2006. Claims 1, 3-11 and 18-27 were pending in this Application. Claim 1 has been amended, Claims 18-24 have been cancelled, without prejudice or disclaimer, and no claims have been added. Thus, Claims 1, 3-11 and 25-27 are currently pending in this Application.

An information disclosure statement and a copy of the entire EP reference for Gregersen (EP263723B1) is filed along with this response. This reference was obtained after the examiner cited the abstract against the present application and the Applicant inadvertently overlooked providing the reference in its entirety in its response to the previous office action.

The Examiner rejected Claims 1, 3-11 and 18-27 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all claims of U.S. Patent No. 6,506,248 B1 (Duselis et al.) and 6,346,146 B1 and also under 35 U.S.C. §102(a, b, and e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Gregersen et al. (EP 263723 – abstract only), Mai et al. (Journal of Mat'l Science – abstract only), and Mai et al. (Journal of Mat'l Science – abstract only and different article from first Mai citation), Cook et al. '762 B2, Dezutter et al. '217 A1, or '452 B2, or Duselis et al. '248 B1 or '146 B1.

CLAIM REJECTIONS ON THE GROUND OF NONSTATUTORY OBVIOUSNESS-TYPE
DOUBLE PATENTING

The Examiner rejected Claim 1, 3-11 and 18-27 on the ground of nonstatutory obviousness-type double patenting as being unpatentable over all claims of U.S. Patent No. 6,506,248 B1 (Duselis et al.) and 6,346,146 B1. This rejection is respectfully traversed.

The examiner is incorrect in stating that "less than 50% bleached cellulose fibers reads upon zero percent or no bleached fibers." (See Office Action dated July 16, 2006, pages 3-4) This interpretation of the claims is incorrect because it ignores part of claim 1. Claim 1 recites in relevant part that "the cellulose fibers comprises a blend of bleached and unbleached cellulose fibers." Claim 1 further recites that the "bleached cellulose fibers comprise less than about 50% of the total cellulose fibers incorporated into the matrix." However, less than 50% cannot be zero since claim 1 had previously recited that "the cellulose fibers comprises a blend of bleached and unbleached cellulose fibers." Thus, clearly the bleached cellulose fibers must comprise a non-zero amount of the bleached cellulose fibers that is also less than 50% of the total amount of cellulose fibers contained within the composite material.

However, in the interest of expediting prosecution, the applicant has amended claim 1 to read in relevant part that "the bleached cellulose fibers comprise greater than about 5% and less than about 50% of the total cellulose fibers incorporated into the matrix". Thus, claim 1 as presently amended clearly does not read upon zero as the lower limit of bleached fibers.

The examiner further argues that the "ODP references teach a mixture of bleached cellulose fibers and unbleached fibers and these references do no limit their invention to any particular range. It could be implied from this reference that any weight percent mixture of unbleached cellulose fibers/bleached cellulose fibers from zero to 100 wt% for each component is within the teaching of 'and mixtures thereof' as set forth in these ODP reference's claims." (Final Office Action dated July 12, 2006, pp. 3-4). However, this is merely stating that the claims of the ODP references "dominate" the claims of the present application. This is insufficient to support a finding of Obviousness Type Double Patenting. In this regard, the Federal Circuit has held in *In re Kaplan* that a double patenting rejection cannot be justified solely on the ground that the subject matter of a claim in a second patent or patent application is "dominated" by the claims of a first patent. *In re Kaplan*, 789 F.2d 1574, 229 USPQ 678, 681 (Fed. Cir. 1986). In reversing the double patenting rejection in the *Kaplan* case, the Federal Circuit held as follows:

By domination we refer, in accordance with established patent law terminology, to that phenomenon, which grows out of the fact that patents have claims, whereunder one patent has a broad or "generic" claim which "reads on" an invention defined by a narrower or more specific claim in another patent, the former "dominating" the latter because the more narrowly claimed invention cannot be practiced without infringing the broader claim. . . . In possibly simpler terms, one patent dominates another if a claim of the first patent reads on a device built or

process practiced according to the second patent disclosure. This commonplace situation is not, *per se*, double patenting as the [Examiner] seemed to think.

(*In re Kaplan*, 789 F.2d 1574, 229 USPQ 678, 681 (Fed. Cir. 1986))

To establish a *prima facie* case of nonstatutory-type (e.g. obviousness type) double patenting, the Examiner must identify the inventions claimed in the claims under consideration and in the patent claims as well as establish that any variation between the inventions claimed in the claims under consideration and the earlier-issued patent claims would have been obvious to a person of ordinary skill in the art. Additionally, the Examiner's showing of obviousness must follow the analysis used to establish a *prima facie* case of obviousness. See *In re Longi*, 759 F.2d 887, 225 USPQ 645, 651 (Fed. Circ. 1985).

Furthermore, the benefits of mixing bleached and unbleached cellulose fibers in the manner as claimed in the claims of the present application were not recognized at the time of the filing of the ODP references. Therefore, there is no incentive to modify the ODP references in a manner as to achieve a combination as claimed in the present application.

Thus, the Examiner has failed establish a *prima facie* case of obviousness type double patenting since it has only been shown that the claims of the ODP references "dominate" the claims of the present application. Furthermore, claims 1, 3-11 of the present application are directed to embodiments that provide surprising results (e.g., that bleached cellulose fibers when used in proper proportions with unbleached, standard grade cellulose fibers can result in a fiber cement composite material

with substantially equal or even superior flexibility, strength, and other physical properties when compared to an equivalent composite material reinforced by the more costly and less abundant premium grade cellulose fibers) that were not anticipated by the ODP references or the other references cited by the examiner.

CLAIM REJECTIONS UNDER 35 U.S.C. § 102 and § 103

The Examiner rejected Claims 1, 3-11 and 18-27 under 35 U.S.C. §102(a, b, and e) as anticipated by or, in the alternative, under 35 U.S.C. §103(a) as obvious over Gregersen et al. (EP 263723 - abstract only), Mai et al. (Journal of Mat'l Science - abstract only), and Mai et al. (Journal of Mat'l's Science - abstract only and different article from first Mai citation), Cook et al. '726 B2, Dezutter et al. '217 A1, or '452 B2, or Duselis et al. '248 B1 or '146 B1. This rejection is respectfully traversed.

Claims 1 and 3-11

With respect to claims 1 and 3-11, the applicant submits the following for the Examiner's consideration.

All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). This is true from both an anticipation stand point and from an obviousness determination. In comparing Gregersen et al. (EP 263723 - abstract only), Mai et al. (Journal of Mat'l Science - abstract only), Mai et al. (Journal of Mat'l's Science - abstract only), Cook et al. '726 B2, Dezutter et al. '217 A1, and '452 B2, and Duselis et al. '248 B1 and '146 B1 to the claimed invention to

determine obviousness or anticipation, limitations of the presently claimed invention may not be ignored. The present invention in claim 1 recites in relevant part "wherein the bleached cellulose fibers comprise greater than about 5% and less than about 50% of the total cellulose fibers incorporated into the matrix." Such a feature is not taught or suggested either individually or in combination by any of the references cited above by the Examiner. Therefore, claim 1 is not anticipated by or obvious in view of Gregersen et al. (EP 263723), Mai et al. (Journal of Mat'l Science - abstract only), Mai et al. (Journal of Mat'l's Science - abstract only), Cook et al. '726 B2, Dezutter et al. '217 A1, and '452 B2, and Duselis et al. '248 B1 and '146 B1 and is patentably distinct from these references.

Referring first to Gregersen, as previously stated in the prior response, Gregersen does not teach using a combination of bleached and unbleached cellulose fibers in which there is a greater amount of unbleached cellulose fibers than bleached cellulose fibers. The examiner argues that "applicant's limitation 'less than 50% bleached cellulose fibers' reads upon zero weight percent or not bleached cellulose fibers." (See Office Action dated July 17, 2006, page 5). This is incorrect. If one reads claim 1 carefully, it is apparent that claim 1 requires both bleached and unbleached cellulose fibers. Claim 1 then further requires that the amount of bleached cellulose fibers be less than 50% of the total amount of cellulose fibers. Therefore, it is clear the Gregerson teaches away from the claims of the present application and certainly does not anticipate the claims of the present application. However, since claim 1 has

been amended to read in relevant part that "the bleached cellulose fibers comprise greater than about 5% and less than about 50% of the total cellulose fibers incorporated into the matrix". Thus, it is doubly clear after amendment that Gregerson does not teach the requirement that "the bleached cellulose fibers comprise greater than about 5% and less than about 50% of the total cellulose fibers incorporated into the matrix."

Furthermore, the results of strengthening the cement matrix by use of a combination of bleached and unbleached cellulose fibers wherein the bleached fibers comprise less than half of the total fibers in the matrix is unexpected and unrecognized even in the Applicant's own work. Gregerson certainly does not teach or suggest this combination and in fact would find the result surprising considering that in most cases Gregerson teaches utilizing the bleached to unbleached fibers in a ratio of three to one. This is far different from the range required by claim 1 of the present application. Therefore, Gregerson does not anticipate or render claim 1 obvious.

Other references also do not teach or suggest the elements required by claim 1 of the present application. For example, the abstract of the Mai reference ("Slow Crack Growth in Bleached Cellulose Fiber Cements", Journal of Materials Science Letters (1984)) provided by the Examiner teaches away from the claimed invention by stating that "unbleached cellulose fibers impart superior resistance to crack growth" as compared with bleached cellulose fibers, thus providing a disincentive towards even trying combinations as claimed in the present application. In response to this argument, the examiner states that the applicant

is arguing a feature not present in the claims. However, again, this is incorrect. The applicant does not argue the feature to show that it is or isn't in the claim, but rather to show a disincentive for one to attempt to combine both bleached and unbleached cellulose fibers in a combination as recited in the claims of the present application. The combination of bleached and unbleached cellulose fibers is a feature of the claims. The statement in Mai that "unbleached cellulose fibers impart superior resistance to crack growth" clearly provides a disincentive to those skilled in the art to even try combining bleached and unbleached cellulose fibers in a manner as recited in the claims of the present invention. Thus, it certainly does not provide any incentive for someone to actually combine bleached and unbleached cellulose fibers.

Furthermore, both of the Mai references merely compare the properties of fiber cement boards using bleached fibers versus fiber cement boards using unbleached fibers. Neither reference teaches using a combination of both bleached and unbleached fibers in the same fiber cement board.

Cook states that "the phrase 'chemically treated' cellulose fiber (or non-cellulose fiber) means a fiber that has been treated with a polyvalent metal-containing compound to produce a fiber with a polyvalent metal-containing compound bound to it." (Cook, col. 4, lines 50-55). "Chemically treated" fibers therefore does not mean "bleached cellulose fibers." Cook teaches, in some embodiments, using "chemically treated" fibers in combination with cellulose fibers. (Cook, col. 10, lines 46-63). However, there is no indication that there is a mixture of bleached and unbleached cellulose fibers. Cook is silent on the

issue. The Examiner seems to be arguing from silence that since Cook does not exclude the combination that the combination is therefore taught. This is absolutely incorrect.

Furthermore, Cook teaches that "bleached pulp, which is fibers that have been delignified to very low levels of lignin, are preferred, although unbleached kraft fibers may be preferred for some applications due to lower cost, especially if alkaline stability is not an issue." (Cook, col. 4, lines 31-35).

However, those skilled in the art will recognize that cementitious materials are inherently alkaline. Therefore, when reading Cook in its entirety for what it actually teaches, it is obvious that Cook actually teaches away from using unbleached fibers in cementitious materials since Cook teaches that unbleached fibers are unsuitable for alkaline substances. Furthermore, there is no teaching or suggestion in Cook to use a mixture of both bleached and unbleached cellulose fibers in the ratios required by the claims of the present application.

Regarding the two Dezutter references, both of these references teach transforming the fibers into a pulp flake which is completely non-analogous to the claims of the present application.

Regarding the two Duselis references, although both Duselis references may suggest a combination of bleached and unbleached cellulose fibers, there is no teaching or suggestion for using a combination of bleached and unbleached fibers where the bleached cellulose fibers comprise less than 50% of the total cellulose fibers in the matrix as recited in claim 1 of the present application.

Thus, the teachings of the prior art are consistent with statements in the application as filed, the applicant states that "contrary to conventional wisdom, Applicant has found that bleached cellulose fibers when used in proper proportions with unbleached, standard grade cellulose fibers can result in a fiber cement composite material with substantially equal or even superior flexibility, strength, and other physical properties when compared to an equivalent composite material reinforced by the more costly and less abundant premium grade cellulose fibers. Thus, the cited references, rather than teaching or suggesting the invention as claimed in the present application, actually lend support to the proposition that the present invention as recited in the claims is novel and non-obvious since the prior art teaches away from the present invention.

Because none of the references cited by the Examiner disclose, describe, teach or contemplate the limitations recited in claim 1, either individually or in combination, independent Claim 1 is patentably distinct from these references, along with dependent Claims 3-11. As such, Applicant requests that the Examiner withdraw these rejections.

Claims 25-27

As with claims 18-24, Applicants believe that the Examiner has failed to establish a *prima facie* case of anticipation or obviousness. Claim 25 recites in part "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10" and "a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10." This limitation is not addressed by the Examiner in the Office Action. Thus, the Applicants believe that the Examiner

has failed to meet the burden of establishing a *prima facie* case of anticipation or obviousness.

Furthermore, the Applicants believe that the limitations of "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10" and "a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10" are neither taught or suggested, either individually or in combination, by the references cited by the Examiner in the Office Action. Therefore, claim 25 is not anticipated nor is it rendered obvious by the references cited by the Examiner. Similarly, claims 26-27 which depend from claim 25 are not anticipated by and are not rendered obvious by the references cited by the Examiner.

Numerous portions of the present application provide support for the limitation that "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10; and a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10" as recited in claim 27. For example, paragraph 15 of the present application states that "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10 and a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10."

In contrast, as mentioned repeatedly above, the prior art references teach away from Applicant's claimed invention. For example, many of the references cited teach using only bleached or unbleached, but not a combination of both and one reference explicitly teaches against combining bleached and unbleached fibers. Thus, as discussed above, the abstract of the Mai reference ("Slow Crack Growth in Bleached Cellulose Fiber

Cements", Journal of Materials Science Letters (1984)) provided by the Examiner explicitly teaches away from the present claims by stating that "unbleached cellulose fibers impart superior resistance to crack growth" as compared with bleached cellulose fibers, thereby providing a disincentive towards even trying combinations as claimed in the present application.

Thus, the teachings of the prior art is consistent with statements in the application as filed, the applicant states that "contrary to conventional wisdom, Applicant has found that bleached cellulose fibers when used in proper proportions with unbleached, standard grade cellulose fibers can result in a fiber cement composite material with substantially equal or even superior flexibility, strength, and other physical properties when compared to an equivalent composite material reinforced by the more costly and less abundant premium grade cellulose fibers." Thus, the cited references, rather than teaching or suggesting the invention as claimed in the present application, actually lend support to the proposition that the present invention as recited in the claims is novel and non-obvious since the prior art teaches away from the present invention.

If the Examiner believes that the features of "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10" and "a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10" are taught in one or more of the references, applicants respectfully request that the Examiner comply with 37 C.F.R. § 1.106(b) and provide a proper rejection subject to traversal by Applicants, designating the particular parts relied upon and clearly explaining the pertinence of each reference.

Because none of the references cited by the Examiner disclose, describe, teach or contemplate these limitations of "a first portion of cellulose fibers having a Kappa number of less than or equal to about 10" and "a second portion of standard grade cellulose fibers having a Kappa number of greater than about 10" either individually or in combination, independent Claim 24 is patentably distinct from these references, along with dependent Claims 26-27. As such, Applicants request that the Examiner withdraw these rejections.

All Claims

Therefore, Applicant respectfully submits that this Application is now in condition for allowance and respectfully requests that the Examiner allow Claims 1, 3-11, and 25-27.

CONCLUSION

Applicants respectfully submit that the Application is in condition for allowance, and Applicants earnestly seek such allowance of Claims 1, 3-11, and 25-27. Should the Examiner have any questions, comments, or suggestions in furtherance of the prosecution of this Application, please contact Applicants' attorney at 214.999.4344. Applicants, through their attorney, stand ready to conduct a telephone interview with the Examiner to review this Application if the Examiner believes that such an interview would assist in the advancement of this Application.

To the extent that any further fees are required during the pendency of this Application, including petition fees, the Commissioner is hereby authorized to charge payment of any additional fees, including, without limitation, any fees under 37 C.F.R. § 1.16 or 37 C.F.R. § 1.17, to Deposit Account No. 07-0153 of Gardere Wynne Sewell LLP and reference Attorney Docket No. 129843.1080. In the event that any additional time is needed for this filing, or any additional time in excess of that requested in a petition for an extension of time, please consider this a petition for an extension of time for any needed extension of time pursuant to 37 C.F.R. § 1.136 or any other section or provision of Title 37. Applicants respectfully request that the Commissioner grant any such petition and authorize the Commissioner to charge the Deposit Account referenced above. Please credit any overpayments to this same Deposit Account.

This is intended to be a complete response to the Office Action mailed July 12, 2006.

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Customer No. 60148

AMENDMENT AND RESPONSE
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**Please direct all correspondence to the practitioner listed
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Respectfully submitted,



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